UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,789	07/10/2003	Masahiro Okada	60188-573	3501

7590   08/05/2008

Jack Q. Lever, Jr.
McDERMOTT, WILL & EMERY
600 Thirteenth Street, N.W.
Washington, DC 20005-3096

EXAMINER
FLETCHER, JAMES A

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
08/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr>
<td rowspan="2">Office Action Summary</td>
<td>Application No.
10/615,789</td>
<td>Applicant(s)
OKADA ET AL.</td>
<td></td>
</tr>
<tr>
<td>Examiner
JAMES A. FLETCHER</td>
<td>Art Unit
2621</td>
<td></td>
</tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 May 2008</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>2-16</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 14 May 2008 have been fully considered but they are

not persuasive.

    In re page 9, Applicant's Representative states: "Robinett is directed to

connection queues being prioritized based upon bursty data with no specific continuity."

    The Examiner agrees with this statement, but respectfully feels the A/R did not

continue with Robinett et al's disclosure of "no bit rate requirement," which indicates that

the data cannot be tied to a clock, or "synchronous" data as the contested claim

language recites.

    Further in re page 9, Applicant's Representative states: "as shown in FIG. 2 of

Robinett, the interface 140 is an asynchronous transfer interface. Robinette does not

teach or suggest assigning priority on the basis of the synchronous transfer or

asynchronous transfer. Indeed, in view of the foregoing statement in Robinett, the

reference arguably teaches away from the subject matter set forth in claim 3"

    The Examiner respectfully disagrees. In addition to disclosing an asynchronous

interface 140 in FIG. 2, Robinett et al also disclose a synchronous interface 150 in FIG.

2, and explicitly discloses how the synchronous interface needs to be prioritized over

the asynchronous interface in Column 14, lines 9-14, since it is tied to a clock and must

be processed based on that clock. Clearly, if a task must be done at a given time, it

must have priority over tasks that are more loosely scheduled.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 2-3, 9-13, 15 and 16 are rejected under 35 U.S.C. 102(b) as being

anticipated by Robinett et al (6,351,474).

Regarding claim 3, Robinett et al disclose an audio-visual data

recording/reproducing device for recording/reproducing stream data that are transferred

synchronously with a display timing, comprising:

- a stream data input/output interface for inputting/outputting the stream data

  from/to an external device (Col 6, lines 32-35 "The data link control circuit has

  an input port for receiving transport streams and an output port for

  transmitting transport streams");

- a timestamp adding and recording portion for generating timestamped data to

  which a timestamp corresponding to the display timing has been added based

  on the stream data that are input via the stream data input/output interface

  and for recording the timestamped data in a recording medium (Col 7, lines

  16-21 "each descriptor is [also] used to record a receipt time stamp, indicating

  when a transport packet is received at an input port, or a dispatch time stamp,

  indicating the time at which a transport packet is to be transmitted from an

  output port");

- a stream data reproducing portion for reproducing stream data based on timestamped data that are read from the recording medium, in order to output the stream data via the stream data input/output interface (Col 7, lines 31-36 "At a time corresponding to a dispatch time recorded in each retrieved descriptor, the data link control circuit transmits the retrieved transport packet to which each retrieved descriptor points in a time slot of the outputted transport stream corresponding to the dispatch time recorded in the retrieved descriptor");

- an asynchronous input/output interface for inputting/outputting from/to the external device (Col 9, lines 21-26 "An asynchronous interface [e.g., an Ethernet interface, ATM interface, etc.] is connected to the remultiplexer node processor [e.g., via a bus] for receiving a video program bearing bit stream from a communication link having a varying end-to-end transmission delay"), timestamped data having a timestamp added thereto that are transferred asynchronously with the display timing (Col 9, lines 26-30 "The processor determines a time at which each of one or more received packets carrying data of the same program of the received bit stream should appear in an outputted TS based on a plurality of time stamps of the program carried in the received bit stream");

- an asynchronous transfer data recording portion for recording the timestamped data that are input via the asynchronous input/output interface in the recording medium (Col 13, lines 2-7 "the storage device 40 can store TSs

information or data produced by the remultiplexer 30, such as transport

packets extracted or copied from the inputted TSs TS1, TS2 or TS3, other

information received at the remultiplexer 30 or information generated by the

remultiplexer 30"); and

- an asynchronous transfer data reproducing portion for reading timestamped

    data from the recording medium, in order to output the timestamped data via

    the asynchronous input/output interface (Col 12 lines 42-45 "The I/O device

    29 is any suitable I/O device 29 for communicating with the remultiplexer 30,

    depending on how the remultiplexer 30 is implemented").

- wherein synchronous transfer is performed with higher preference than

    asynchronous transfer (Col 41, lines 3-6 "connection queues with descriptors

    pointing to transport packets containing bursty data with no specific continuity,

    propagation delay or bit rate requirement, are assigned the lowest priority").

Regarding claim 2, Robinett et al disclose an audio-visual data

recording/reproducing device comprising said recording medium in which the

timestamped data are recorded (Col 12 lines 42-45 "The I/O device 29 is any suitable

I/O device 29 for communicating with the remultiplexer 30, depending on how the

remultiplexer 30 is implemented").

Regarding claim 9, Robinett et al disclose an audio-visual data

recording/reproducing device wherein the synchronous transfer and the asynchronous

transfer can be performed in parallel (Col 49, lines 17-22 "multiple remultiplexer nodes

100 may be interconnected to each other by various communication links, the adaptor

110, and interfaces 140 and 150. Each of these remultiplexer nodes 100 may be

controlled by the controller 20 (FIG. 1) to act in concert as a single remultiplexer 30").

Regarding claim 10, Robinett et al disclose an audio-visual data

recording/reproducing device wherein at least one of the transfer bands of the

synchronous transfer and the asynchronous transfer can be set in a variable manner

(Col 49, line 66 – Col 50, line 3 "bursty devices 200 may also be provided for purposes

of injecting and/or extracting data into the TSs, e.g., the TS20. For example, the bursty

device 200 may be a server that provides internet access, a web server a web terminal,

etc.").

Regarding claim 11, Robinett et al disclose an audio-visual data

recording/reproducing device comprising a buffer memory for holding the timestamped

data associated with the synchronous transfer and the timestamped data associated

with the asynchronous transfer (Col 15, lines 50-60 "When transmitting packets, the

data link control circuit 112 retrieves descriptors for outgoing transport packets from the

cache 114 and transmits the corresponding transport packets in time slots of the

outgoing TS that occur when the time of the reference clock generator 113

approximately equals the dispatch times indicated in the respective descriptors. The

data link control circuit 112 furthermore performs any final PCR correction in outputted

transport packets as necessary so that the PCR indicated in the transport packets is

synchronized with the precise alignment of the transport packet in the outgoing TS"),

wherein a ratio between a size of a region where the timestamped data associated with

the synchronous transfer and a size of a region where the timestamped data associated

with the asynchronous transfer in the buffer memory is set in accordance with the
setting of the transfer bands (Col 42, lines 55-61 "the processor 160 may choose to
insert bursty data into only some vacant transport packet time slots, choose to insert
bursty data into alternate or spaced apart transport packet time slots or choose not to
insert bursty data into any vacant transport packet time slots, so as to regulate the
transmission of data to, or to prevent overflow of, an assumed receiver bursty data
buffer").

      Regarding claim 12, Robinett et al disclose an audio-visual data
recording/reproducing device comprising:

- an encryption portion for encrypting the timestamped data that are input via
  the asynchronous input/output interface and that are recorded in the
  recording medium by the asynchronous transfer data recording portion (Col
  14, lines 14-16 "the remultiplexer node 100 can have an optional
  scrambler/descrambler [which may be implemented as an
  encryptor/decryptor]"); and
- a decryption portion for decrypting the timestamped data that are read from
  the recording medium by the asynchronous transfer data reproducing portion
  and that are transferred to the external device via the asynchronous
  input/output interface (Col 14, lines 14-16 "the remultiplexer node 100 can
  have an optional scrambler/descrambler [which may be implemented as an
  encryptor/decryptor]").

Regarding claim 13, Robinett et al disclose an audio-visual data recording/reproducing device wherein the encryption portion and the decryption portion perform encryption or decryption, using key information that is unique to the audio-visual data recording/reproducing device (Col 17, lines 47-50 "The field 129-9 is for storing a scrambling/descrambling control word or other information for use in scrambling or descrambling").

Regarding claim 15, Robinett et al disclose an audio-visual data recording device for recording stream data that are transferred synchronously with a display timing, comprising:

- a stream data input interface for inputting the stream data from an external device (Col 6, lines 32-35 "The data link control circuit has an input port for receiving transport streams and an output port for transmitting transport streams"); and

- a timestamp adding and recording portion for generating timestamped data to which a timestamp corresponding to the display timing has been added thereto based on the stream data that are input via the stream data input interface and for recording the time stamped data in a recording medium (Col 7, lines 16-21 "each descriptor is (also) used to record a receipt time stamp, indicating when a transport packet is received at an input port, or a dispatch time stamp, indicating the time at which a transport packet is to be transmitted from an output port");

- an asynchronous input interface for inputting timestamped data already having a timestamp added thereto that are transferred asynchronously with the display timing from the external device (Col 9, lines 21-26 "An asynchronous interface [e.g., an Ethernet interface, ATM interface, etc.] is connected to the remultiplexer node processor [e.g., via a bus] for receiving a video program bearing bit stream from a communication link having a varying end-to-end transmission delay" and Col 9, lines 26-30 "The processor determines a time at which each of one or more received packets carrying data of the same program of the received bit stream should appear in an outputted TS based on a plurality of time stamps of the program carried in the received bit stream"); and

- an asynchronous transfer data recording portion for recording the timestamped data that are input via the asynchronous input interface in the recording medium (Col 12 lines 42-45 "The I/O device 29 is any suitable I/O device 29 for communicating with the remultiplexer 30, depending on how the remultiplexer 30 is implemented").

Regarding claim 16, Robinett et al disclose an audio-visual data reproducing device for reproducing timestamped data to which a timestamp corresponding to a display timing has been added thereto that are recorded on a recording medium and for transferring the timestamped data as stream data that are synchronous with the display timing to an external device, comprising:

- a stream data reproducing portion for reading the timestamped data recorded

  in the recording medium (Col 12 line 66 – Col 13 line 2 "The storage device

  40 can produce TSs or data as inputted, to-be-remultiplexed information for

  remultiplexing into the outputted TSs TS4 or TS5 by the remultiplexer 30"), for

  eliminating the timestamp from the timestamped data and for outputting the

  stream data with a timing based on the timestamped data (Col 9, lines 26-30

  "The processor determines a time at which each of one or more received

  packets carrying data of the same program of the received bit stream should

  appear in an outputted TS based on a plurality of time stamps of the program

  carried in the received bit stream"); and

- a stream data output interface for outputting, to the external device, the

  stream data that are output from the stream data reproducing portion (Col 12

  lines 42-45 "The I/O device 29 is any suitable I/O device 29 for

  communicating with the remultiplexer 30, depending on how the remultiplexer

  30 is implemented");

- an asynchronous output interface for outputting, to the external device, the

  timestamped data having the timestamp added thereto that are transferred

  asynchronously with the display timing (Col 12 lines 42-45 "The I/O device 29

  is any suitable I/O device 29 for communicating with the remultiplexer 30,

  depending on how the remultiplexer 30 is implemented"); and

- an asynchronous transfer data reproducing portion for reading the

  timestamped data from the recording medium, in order to output the

timestamped data via the asynchronous output interface (Col 9, lines 19-21 "a

method is provided for re-timing video program bearing data received via an

asynchronous communication link").

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 4-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Robinett et al.

Regarding claims 4-8, Robinett et al disclose setting priorities for synchronous

and asynchronous data as analyzed and discussed above regarding claim 3, but do not

specify means of implementing those priorities.

The Examiner takes official notice that interrupting and pausing a low priority task

to perform a high priority task, or delaying a low priority task while a high priority task is

being performed is notoriously well known, and based on common sense would provide

the user with high priority data before low priority data,

Therefore, it would have been obvious to one of ordinary skill in the art to modify

Robinett et al to use various methods of implementation of priorities such as interrupting

low priority data transfer in favor of high priority interrupt,

Regarding claim 14, Robinett et al are silent regarding reasons for encryption.

The Examiner takes official notice that encryption for the sake of protecting copyrighted material is notoriously well known, and provides the copyright holder with a reliable means of preventing unauthorized use of protected material.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Robinett et al in order to encrypt based on copyright.

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FLETCHER whose telephone number is (571)272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2623

JAF
22 July 2008